**Commonwealth of Kentucky**
**Division for Air Quality**

# *PERMIT STATEMENT OF BASIS*

FINAL PERMIT NO. F-03-012
Polymer Partners (previously named Clariant)
1450 COMMONWEALTH DRIVE, HENDERSON, KENTUCKY
AUGUST 5, 2003
GAURAV SHIL, REVIEWER
PLANT I.D. # 021-0101-00125
APPLICATION LOG # 54498

**SOURCE DESCRIPTION:**

The Polymer Partners (previously named Clariant) located at Henderson, Kentucky, manufactures black plastic color concentrates through a process of compounding various polymer resins with carbon black, calcium carbonate and/or other filler materials.

The source is currently classified as Conditional Major. The source has applied for permit renewal for conditional major status under 401 KAR 52:030, federally-enforceable permits.

The following table describes different emission points present at the facility:

| Emission point | Description of emission point | Basis for PTE |
|---|---|---|
| 01 (001*) | Dump station for CP-45 FCM | 1000 lbs/hr of material process rate |
| 02 (001) | Feed station for CP-45 FCM | 1000 lbs/hr of material process rate |
| 03 (001) | CP-45 Farrel Continuous Mixer (FCM) | 1000 lbs/hr of material process rate |
| 04 (001) | Dump station for #6 FCM | 2000 lbs/hr of material process rate |
| 05 (001) | Additive station for #6 FCM | 2000 lbs/hr of material process rate |
| 06 (001) | Feed station for #6 FCM | 2000 lbs/hr of material process rate |
| 07 (001) | #6 FCM | 2000 lbs/hr of material process rate |
| 08 (001) | Dump station for #9 FCM | 5000 lbs/hr of material process rate |
| 09 (001) | Additive station for #9 FCM | 5000 lbs/hr of material process rate |
| 10 (001) | Feed station for #9 FCM | 5000 lbs/hr of material process rate |
| 11 (001) | #9 FCM | 5000 lbs/hr of material process rate |
| 12 (001) | Blending silo #1 | 5000 lbs/hr of material process rate |
| 13 (001) | Blending silo #2 | 5000 lbs/hr of material process rate |
| 14 (001) | Schick loading hopper | 5000 lbs/hr of material process rate |
| 15 (001) | Finished product load station #1 | 5000 lbs/hr of material process rate |
| 16 (001) | Finished product load station #1 | 5000 lbs/hr of material process rate |
| 01 (002~) | Dump station for line #23 FCM | 500 lbs/hr of material process rate |
| 02 (002~) | Feed station for line #23 FCM | 500 lbs/hr of material process rate |
| 03 (002~) | Line #23 FCM | 500 lbs/hr of material process rate |
| 04 (002~) | 100 $ft^3$ ribbon blender | 2000 lbs/hr of material process rate |
| 01 (003) | Six Outdoor silos | 8000 lbs/hr of material process rate |
| 01 (004) | Rail car unloading | 2500 lbs/hr of material process rate |
| - | Pneumatic conveying system** | Insignificant activity |

| | | |
|---|---|---|
| - | Boy 22T lab molding machine** | Insignificant activity |
| - | Cook off oven** | Insignificant activity |

**COMMENTS:**

**Type of controls for different emission points and their control efficiency:**

| Emission Point | Type of control, Control efficiency |
|---|---|
| 01 (001*) | Two filter units w/ bank of six filters with secondary bag house control, 99.9% removal |
| 02 (001) | Two filter units w/ bank of six filters with secondary bag house control, 99.9% removal |
| 03 (001) | NA |
| 04 (001) | Two filter units w/ bank of six filters with secondary bag house control, 99.9% removal |
| 05 (001) | Two filter units w/ bank of six filters with secondary bag house control, 99.9% removal |
| 06 (001) | Two filter units w/ bank of six filters with secondary bag house control, 99.9% removal |
| 07 (001) | NA |
| 08 (001) | Two filter units w/ bank of six filters with secondary bag house control, 99.9% removal |
| 09 (001) | Two filter units w/ bank of six filters with secondary bag house control, 99.9% removal |
| 10 (001) | Two filter units w/ bank of six filters with secondary bag house control, 99.9% removal |
| 11 (001) | NA |
| 12 (001) | Dacron polyester baghouse, 99.9% removal |
| 13 (001) | Dacron polyester baghouse, 99.9% removal |
| 14 (001) | NA |
| 15 (001) | NA |
| 16 (001) | NA |
| 01 (002~) | Polyester felt filter bags, 99.9% removal |
| 02 (002~) | Polyester felt filter bags, 99.9% removal |
| 03 (002~) | NA |
| 04 (002~) | Polyester felt filter baghouse, 99.9% removal |
| 01 (003) | Dacron polyester filter baghouse, 99.9% removal |
| 01 (004) | Dacron polyester filter baghouse, 99.9% removal |

* Process room #2

~ Process room #1

** Insignificant activity

**Emission factors and their source:**

CRI D EF V5.1A AP 42 Volume 1: Stationary point sources, Fifth edition, Section 6.6.2 Plastics, was used to estimate emission factors for uncontrolled plastic resins during different processing operations and then engineering estimate based on maximum amount of plastics processed was used to calculate emission factors for controlled plastic resin emissions.

Engineering Estimate using maximum amount of carbon black that can be fed into the different emission points was used to estimate emission factors for controlled carbon black emissions.

**Applicable Regulations:**

State regulation 401 KAR 59:010, New process operations, applies to the above emission points because these are process operations that were commenced after July 2, 1975 and are not subject to another emission standard with respect to particulates in the above mentioned chapter.

State regulation 401 KAR 52:030, Federally-enforceable permits for non-major sources.

State regulation 401 KAR 63:020, Potentially hazardous matter or toxic substances.

**EMISSION AND OPERATING CAPS DESCRIPTION:**

The actual emissions of HAPS for a single pollutant is limited to stay below 9.0 tons per year. The combined emissions for HAPs is limited to stay below 22.5 tons per year. The actual VOC emissions is limited to stay below 90.0 tons per year. Emission limitations for particulate matter are pursuant to regulation 401 KAR 59:010, Section 3 (2). Compliance with annual limitations is based on emissions from any consecutive twelve-month period for the entire source.

**CREDIBLE EVIDENCE:**

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.

**PUBLIC AND U.S. EPA REVIEW:**

On May 29, 2003, the public notice on availability of the Draft Conditional Major renewal Permit and supporting material for comments by persons affected by this action was published in *The Gleaner* in Henderson, Kentucky. The public comment period expired 30 days from the date of publication.

Since, no comments were received during the public comment period, the permit now being issued is a proposed permit. U.S. EPA has 45 days from the date of the issuance of the proposed permit to comment on it. If no comments are received from U.S. EPA during this period, the proposed permit shall become the final permit.